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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/708,100	11/01/2000	John M. Pinneo	P1-007	9615

7590 08/14/2003
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EXAMINER

VO, HAI

ART UNIT	PAPER NUMBER
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1771

DATE MAILED: 08/14/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/708,100

Applicant(s)

PINNEO ET AL.

Examiner

Hai Vo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 July 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4,6-9 and 11-30 is/are pending in the application.
- 4a) Of the above claim(s) 12-27 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 28-30 is/are allowed.
- 6) ☒ Claim(s) 1-4,6-9 and 11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 3, 6-9, and 11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 3 and 8, the formation of interlayer coating between the diamond and the non-metallic framework material substrate renders the claims indefinite because the independent claims 1 and 6 from which claims 3 and 8 depend respectively recite that the diamond is in direct contact with the non-metallic framework material substrate. It seems that the limitations in claims 3 and 8 are contradictory to the recitations from claims 1 and 6 respectively.

In Claim 6, line 3, the term "the material" should be changed to the foam substrate because it is unclear that the material is the non-metallic open-cell foam substrate or other than the foam substrate.

Claim 7 and 8 recite the limitation "framework material" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Withdrawal of Finality

3. Applicant's request for reconsideration of the finality of the rejection of the last Office action mailed on 04/09/2003 is persuasive and, therefore, the finality of that action is withdrawn.

Claim Rejections - 35 USC § 103

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4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 2, and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cho (US 4,944,772) in view of Bovenkerk et al (US 4,288,248). Cho teaches a production of supported polycrystalline abrasive compact comprising a porous polycrystalline diamond compact 26, an intermediate diamond layer 28 having a thickness of 30 to 500 microns, and a carbide support 24 (figure 3). Cho teaches the porous polycrystalline diamond compact having been disclosed in US 4,288,248 (column 5, lines 9-11). US 4,288,248 to Bovenkerk discloses a porous polycrystalline diamond compact defined a substantially continuous interconnected network of pores, dispersed throughout the compact. Bovenkerk further teaches the network of pores runs throughout the diamond layer and most are less than a micron in diameter. This indicates that the acid penetrated the entire diamond layer and acted to remove the metallic phase substantially uniform throughout (column 4, lines 60-68). The acid is able to flow through the pore structure to remove the infiltrant in the compact. Likewise, it is clearly apparent the porous polycrystalline diamond compact must have a porous construction to allow the flow of fluids in at least one direction through the compact. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the porous polycrystalline diamond compact having a substantially continuous interconnected

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network of pores because such is the typical feature of the porous polycrystalline diamond compact material and Bovenkerk provides the necessary details to practice the invention of Cho.

Response to Arguments

6. Applicant's arguments with respect to claims 1, 2 and 4 have been considered but are moot in view of the new ground(s) of rejection.
7. The art rejections over Jury have been overcome by the present amendment with respect to claims 1, 2, 4, 6, 7, 9, and 11.

Allowable Subject Matter

8. Claims 6, 7, 9 and 11 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.
9. Claims 28-30 are allowed. None of the prior art teaches or suggests an article comprising diamond directly deposited on a non-metallic open cell foam substrate having a porosity sufficient to permit the flow of fluids in at least one direction through the foam substrate. Further, none of the prior art teaches or suggests an article comprising diamond directly deposited on a non-metallic framework material substrate having a porosity sufficient to permit the flow of fluids in at least one direction through the foam substrate, wherein the diamond is fully coalesced.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

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§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai Vo whose telephone number is (703) 605-4426. The examiner can normally be reached on Tue-Fri, 8:30-6:00 and on alternating Mondays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (703) 308-2414. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.


TERREL MORRIS
SUPERVISORY PATENT EXAMINER
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